

2.8 Probability & Odds

Use pages 114 – 117 to help you complete the following Independent Learning activity sheet.

Define: Probability of an Event

Define: outcomes

Define: favorable outcomes

$P(\text{Event}) = \frac{\text{the number of favorable outcomes}}{\text{the total number of possible outcomes}}$

Try this.

- 1) There are 5 green marbles, 4 red marbles and 10 yellow marbles in a bag. What is the probability that a yellow marble is chosen at random?

Explain the difference between Theoretical Probability and Experimental Probability using the definitions of those given on p. 115.

Try this.

2) What is the probability of getting Heads when flipping a coin?

3) Suzie Q. flipped a coin 12 times. Eight of the times, the coin landed on heads and four of the times the coin landed on tails. What is the experimental probability of Suzie getting tails?

Odds: When all outcomes are equally likely, the odds are given by the formula below. (Complete using the information in section 2.8 of your text.)

Odds = _____

Try this.

4) A candy dish contains 12 Milky Ways and 21 Starbursts. What are the odds that a candy picked at random will be a Starburst?

5) A letter is randomly chosen from the alphabet. What are the odds that the letter chosen is not a vowel? What are the odds that the letter chosen IS a vowel?

*To Calculate Odds if Probability is Given:

$$\text{Odds} = \frac{\text{Probability Event Will Occur}}{1 - (\text{Probability Event Will Occur})}$$

Try this.

7) In a shoe factory, the probability of a defective shoe being produced is 0.005. What are the odds of producing a defective shoe?